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## MASS PRODUCE ELECTRONIC MICROSCOPES; PERFECT NEW SCIENTIFIC. LABORATORY INSTRUMENTS

SOVIET ELECTRONIC MICROSCOPE SURPASSES OPTICAL TYPES -- Moscow, Vechernyaya Moskva, 10 Oct 50

Yu. M. Kushnir, candidate in physicomathematical sciences, recently gave a lecture on the Soviet electronic microscope at the Central Lecture Hall of the All-Union Society for the Dissemination of Political and Scientific Knowledge. The lecture was attended by students of Moscow higher institutes of learning, workers of the ministries in whose laboratories the electronic microscopes were created, and associates of the scientific research institutes using the instrument.

The electronic microscope has great advantages over the optical type. Whereas the optical microscope enlarges the object under study 1,000 to 2,000 times, the electronic microscope magnifies it 100,000 times. The new microscope has enabled scientists to see disease-producing viruses capable of filtration, and to examine isolated large molecules. It has made it possible for engineers to get a complete picture of the behavior of metals during the processes of tempering, annealing, and machining.

There were many difficulties to be surmounted in designing such a complex and accurate instrument. Academician A A. Lebedev, V. N. Vertsner, and N. G. Zandin, inventors of the first Soviet electronic microscopes, have been awarded the Stalin Prize.

The Five-Year Plan for output of electronic microscopes has been fulfilled and exceeded. The country has received a large quantity of the instruments, which are necessary in many branches of the national economy. At present, mass production of some types of electronic microscopes has begun.

Kushnir stated that the USSR ned not been mentioned in a chart of countries producing electronic microscopes which was published in an American periodical. The American falsifiers of science are trying to conceal the fact that the USSR holds first place in the world in the number of existing microscopes.

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PLANETARIUM GETS NEW INSTRUMENT -- Moscow, Vechernyaya Moskva, 27 Jan 51

A new instrument at the Moscow Planetarium makes possible visual demonstration of the rotation of the earth around its axis. It was designed by G. L. Bokhekhonov, a young candidate in technical sciences.

Heretofore, the Fuko pendulum has been used for this purpose. However, it is very cumbersome, requiring an area several dozen meters high. The new instrument is based on different principles. It is less expensive, simpler in working principle, and can be used in ordinary rooms.

SEARCHLIGHT PLANT SPEEDS MACHINE PROCESSES -- Moscow, Vechernyaya Moskva, 2 Feb 51

In January 1951, the machine shop of the Moscow Searchlight Plant greatly increased the number of its high-speed-machine operators. The shop has developed new methods or producing various parts which save much time in the machining process. More than 50 different highly productive work methods are being introduced.

PRODUCES NEW UNIVERSAL ELECTRIC METER -- Moscow, Vechernyaya Moskva, 29 Jul 51

The Moscow Fizelektropribor Plant, which makes everything for children's mechanical toys to complicated measuring instruments, recently put out a universal electric "avometer," which measures the intensity of a direct or alternating current from 0 to 500 milliamperes, voltages from 0 to 500, and resistances up to 2 megohms. The meter will find wide application in industry and amateur radio operation.

Many of the plant's products have been modernized, labor consumption has sharply decreased, and the consumption of costly materials has been lowered 40-50 percent. Workers of the plant pledged to fill an order for a new building of the Moscow State University much earlier than the assigned date, and to install a conveyer belt in the plant's laboratory instrument assembly shop. The conveyer is already in operation, and after  $2\frac{1}{2}$  weeks of use, has increased labor productivity in the shop 35 percent. New work methods have permitted an increase in the speed of the conveyer belt, and a finished instrument leaves the conveyer oftener than once a minute.

The plant is to produce tens of thousands of voltmeters and ammeters for schools and laboratories in 1951.

TO FURNISH INSTRUMENTS FOR SCIENCE LABORATORIES -- Moscow, Verhernyaya Moskva, 7 Feb 51

The Moscow Instruments Plant completed its January production program 2 days earlier than planned. This is the result of steady, efficient work in the shops and sections.

The plant is filling orders for the great construction projects / the Stalingrad and Kuybyshev hydroelectric stations and the Volga-Don Canal / , and is equipping tall buildings in Moscow and numerous laboratories of the future Palace of Science of Moscow State University with different types of instruments.

Methods to cut consumption of metal and electric power are being discussed.

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